FARM INDEX

U.S. Department of Agriculture
February 1977

Dawn of a New South

Outlook

If you waited till the thermometer hit rock bottom before shopping for winter apparel, prices for warm clothing may have sent more shivers through the spine than the temperatures outside, if indeed the garments were available at all.

One of the cruelest winters of this century caught consumers off guard. But capricious Mother Nature is only one in a cast of characters responsible for steeper clothing prices and limited selections.

ERS economists describe the raw fiber supply situation as extremely tight at the moment. It has been so for several months, for that matter. That's been true practically the world over. A deeper worry is that demand might continue to outrace supply for some time to come.

Cotton is a prime example. The outdoorsman's unsuccessful hunt for inexpensive long underwear can be blamed on a so-so inventory of cotton supplies.

The Nation's stocks of raw cotton in 1976/77 (August-July marketing year) swelled a mere 1 percent from last season's, of itself, the skimpiest in 52 years.

Come summer, stocks will be eroded to the point where mills will barely have enough to keep operating until the 1977 crop is harvested in the fall. Next August's level could plunge to the lowest mark since 1952.

U.S. cotton disappearance in 1976/77 may be up almost a tenth from last season's 10.6 million bales, thanks to active export demand. American farmers this year may garner about a fourth of world trade, compared with 18 percent in 1975/76.

If items made of wool cost more than a year ago, blame brisk demand coupled with reduced supplies. Through November 1976, we used 190 million pounds (clean basis), nearly 35 percent more than in the first 11 months of 1975. Growth in wool imports enabled most of that surge.

The average farm price of wool in the U.S. spurted more than 50 percent between December 1975 and December 1976. Prices are expected to remain strong so long as demand stays lively and wool supplies remain tight around the world.

Serious drought in Australia has cut into the sheep flock by an estimated 7 percent, and the 1977 wool clip will reflect the loss. Wool stockpiles in Australia, New Zealand, and South Africa have seen heavy drawdowns.

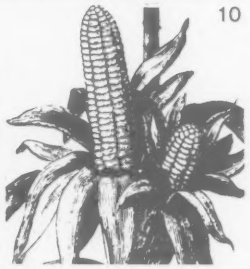
In the U.S., the sheep population was reduced by another 7 percent from 1975 to 1976. USDA analysts hold little hope of a reversal in this trend in the foreseeable future, despite the incentive of attractive wool prices to farmers.

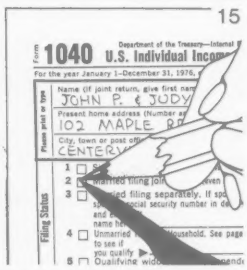
What about manmade fibers? Serious questions are being asked about the ability of manmade fiber producers to keep pace with the projected growth in fiber demand.

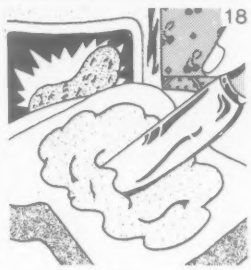
After sharp increases in the 1960's and early 1970's, manmade fiber output trailed off, recovered slightly in 1976, but still lagged behind 1974's record.

All in all, 1977 shapes up as a year of tighter supplies of cotton than of manmade fibers. And with more competitive prices, manmade fibers have a chance to take advantage of a much stronger demand for fibers on the whole. However, cotton interests shouldn't lose sleep over that prospect —when the 1977 cotton crop comes in, cotton's competitive position should improve, assuming farmers stick to their January 1 planting intentions.

Contents







Features

Dawn of a New South 4
A new day of Dixie agriculture has arrived, with diversification replacing one-crop reliance.

King Cotton: Dethroned But Not Forgotten 7
Upstart oilcrops have claimed top-crop status in the Southland.

Our Big 10 Export States 9

Census Update: America's Heartland 10
Data from the 1974 Census of Agriculture show few surprises in the important North Central region.

Whither the Weather? 12
Greater weather variations could greatly affect U.S. and world agriculture.

Less Taxing Times for Farm Heirs 15
The new U.S. tax reform act may ease the problems of passing on the family farm to widows and children.

Goober Growing Isn't Peanuts 18
U.S. peanut growers face profits, surpluses, and growing world competition.

Departments

Outlook 2

Recent Publications 22

Economic Trends 23

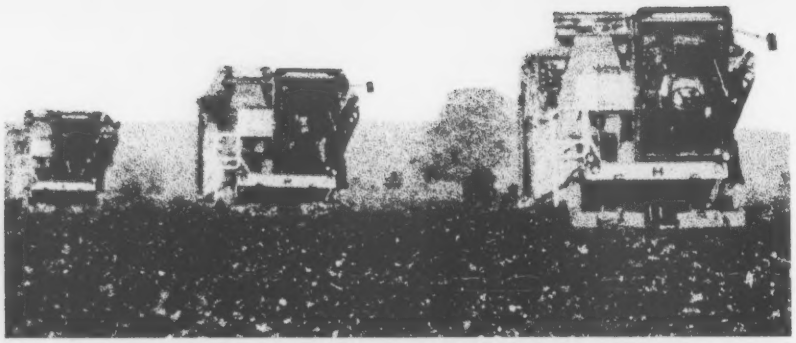
Daniel R. Williamson, Editor
Dorothy Mayes, Associate Editor; Martha Newton, Jerry Casbolt, Staff Editors; Martin Schubkegel, Contributing Editor; James Schleyer, Art Director.

The Farm Index is published monthly by the Economic Research Service, U.S. Department of Agriculture. February 1977. Vol. XVI. No. 2.

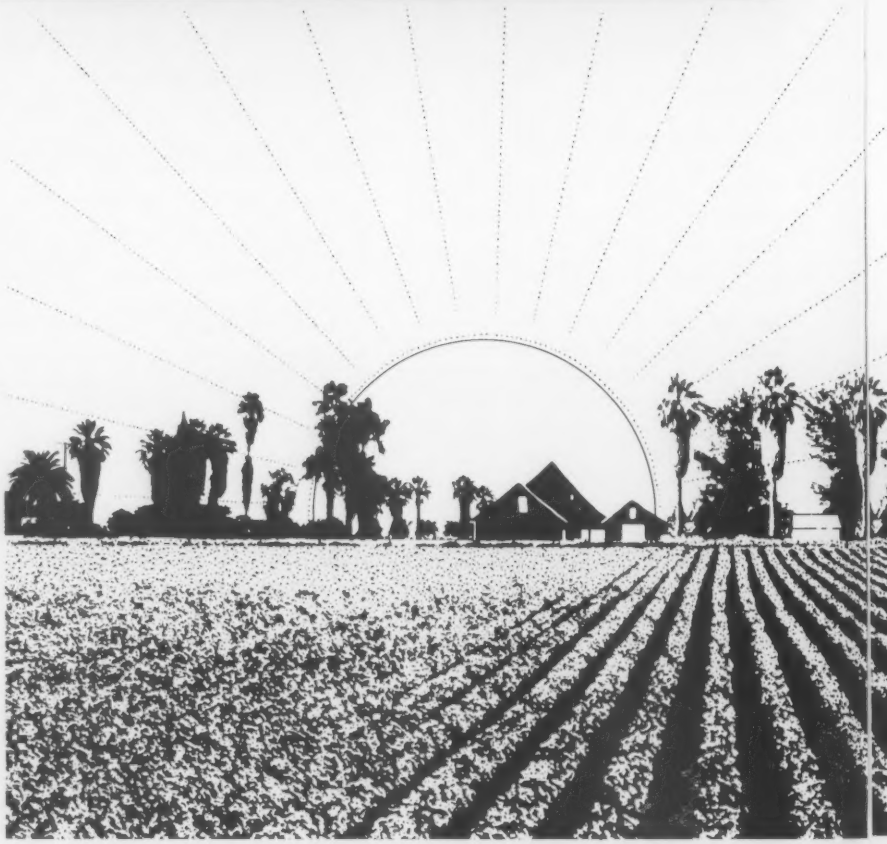
Readers are invited to write for the research materials on which we base our articles. Address queries to The Farm Index, Rm. 1664, Economic Research Service, U.S. Department of Agriculture, Wash., D.C. 20250. Please cite article titles when ordering.

Contents of this magazine may be reprinted without permission. They are based on research of the Economic Research Service and on studies done in cooperation with State agricultural experiment stations. The Secretary of Agriculture has determined that the publicaion of this periodical is necessary in the transaction of the public business required by law of this Department. Use of funds for printing this publication approved by Director of the Office of Management and Budget through May 24, 1977. Subscription price $7.70 yearly ($9.65 foreign). Order from Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Use of commercial and trade names does not imply approval or constitute endorsement by USDA or the Economic Research Service.

Dawn of a New South



Editor's note: During 1977, Farm Index will take a close look at each U.S. region's agricultural economy, as material becomes available. This is the first of several regional overview articles.



Nervous reporters who gingerly stepped through a peanut field last summer to follow Plains, Georgia's best known farmer could hardly be blamed for not noticing the thriving agriculture of the "New South."

Preoccupied with politics and rattlesnakes, the weary journalists may not have noticed the economic uprising taking place around them.

All across the South, rich fields are yielding great harvests of crops that only a generation or so ago were practically strangers to Dixie soils. After all, cotton had jealously staked out that domain.

Southern agriculture followed the pattern of sudden, vigorous change that marked the course of the New South's surge to industrialization, urban development, and social change.

Generation of change. A generation ago, the South was still dominated by a one-crop agricultural system, sluggish industrial and urban development, and a painful alienation from the rest of the Nation—a persistent hangover from the Reconstruction trauma.

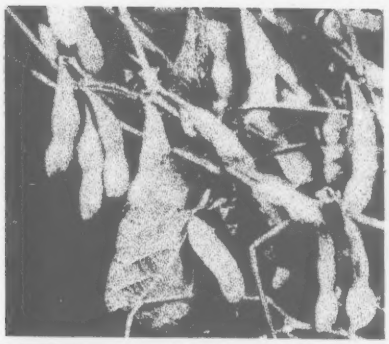
Today, the Nation takes note of a "New South," where industrial growth surges, and urban centers flourish.

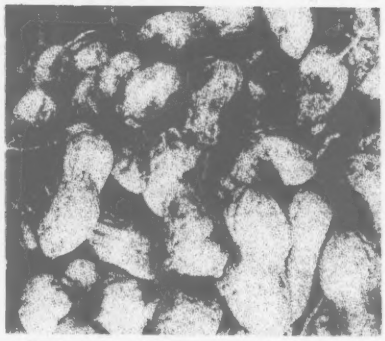
With all of this window-dressing grabbing the National spotlight, the South's greatest economic force has broken its traditional shackles of cotton and sprinted ahead. Southern agriculture came of age, as oilseed crops squeezed out cotton as the kingpin crop, and as Dixie farmers rapidly adopted modern technology and operating methods.

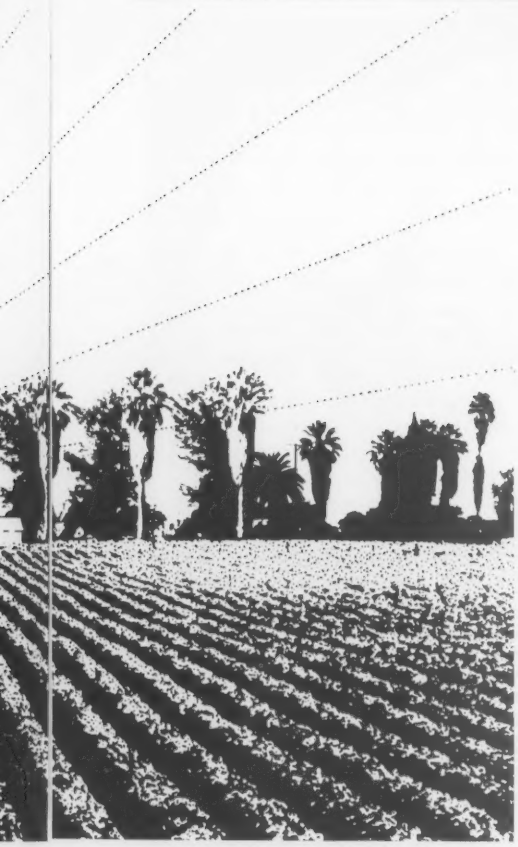
This Southern-styled success story has far-reaching effects for the Nation.

A third of U.S. output. With about a fifth of U.S. land—not including Hawaii or Alaska—the 11 States of the old Confederacy, plus Oklahoma and Kentucky, have a disproportionately large share of U.S. agriculture. With 42 percent of all American farms, the South produced $28 billion worth of farm goods in 1975—almost a third of the $90 billion national farm output.

In farm income, Southerners netted about $7 billion—almost a third of the $22.4 billion that all farmers earned that year. But like farmers in other regions, Southerners contribute far more to their region's economy than the raw figures indicate.







Farm business activity is only the tip of the iceberg—the food and fiber system of the economy. Farming is sandwiched between an input sector that provides goods and services that farmers use, and a marketing sector that processes farm products into final forms for consumers.

Great economic impact. A more realistic view of agriculture's economic impact on the Nation can thus be derived by adding these values to those directly associated with farming.

Nationwide, farmers bought about $56 billion of inputs in 1975. Moreover, the $90 billion in raw products that left the farm that year mushroomed in value to $288 billion as they reached final form.

The deceptive impact of farm contributions can also be seen in the gross national product (GNP)—a measuring stick of the total U.S. economy. On paper, farmers contributed a substantial $50 billion to the GNP in 1975—3 percent of the total. Yet, when myriad indirect impacts are added, ERS figures that the food and fiber sector accounts for a fifth of the total U.S. GNP.

Southern importance. Returning to the South, the region's importance is then considerable, since Southern agriculture accounts for a third of that great industry's farm income, cropland, and production.

While such figures are impressive, the naked eye can see dramatic evidence of this Southern "happening" growing in fields once laden with cotton.

Only a decade ago, 12 million acres of Southern cropland grew cotton—far and away the main crop, while only 9½ million acres were given to winter wheat, and 9 million to soybeans. In 1975, soybeans sprawled over 19 million acres, followed by winter wheat with 15 million acres. Cotton was planted on a mere 7½ million acres.

Oil crop profits. The plantings, of course, reflect the profitability. In 1975, oil crops—soybean and peanut—far outstripped other crops in percentage of total receipts, followed by fruits and nuts, and vegetables. Others, in descending order, were food grains, feed grains, tobacco, and, lastly, cotton.

On the four-legged front of the farm economy, beef cattle numbers have increased 20 percent in the South since 1970. From 1965 to 1975, the January inventory of cattle and calves on Dixie farms rose from 34 million to almost 50 million. In the same period, hogs and pigs numbers seesawed so that the December 1975 count was comparable to that in 1965.

Overall, livestock production in 1975 contributed 46 percent of cash receipts to Southern farmers.

Bright prospects. If this brief look at Southern farming today shows a glowing present, then the prospects for the future are indeed bright.

Although the South now uses a third of the Nation's cropland—as much as 122 million acres—it has the Nation's largest reserve of potential cropland. An additional 139 million acres could conceivably be tilled, according to ERS estimates. The reserve includes about half of existing pastureland, and a fourth of the wooded lands.

Although most of this potential cropland will probably remain untapped, some will be added to meet demands in coming years.

More farmland used. In fact, a trend is already underway to bring more land into crop production—both in the South and nationwide—after a period of declining acreage. In 1970, only 88 percent of the 1950 U.S. total cropland acreage was in use. In the South, only 76 percent of the 1950 acreage was in use. By 1975, national acreage rose 9 percent, with a 12-percent jump in the South.

Still another national trend is catching on in the South—a shift to fewer and larger farms. The South, with two-fifths of all U.S. farms, has smaller operations that average almost 100 acres less than the national average. Yet, since 1971, the average size of Southern farms has grown 4 percent, while numbers have dwindled 5 percent.

The larger operations tend to improve operating efficiency, as is reflected by a one-third drop in hours of labor used, both in the South and nationally. This drop occurred despite steady production gains as farmers substituted technology, better management, and other capital inputs for labor.

Less labor needed. In the South, the crop mix change has also reduced the need for labor, as the rise of such less labor-intensive crops as soybeans replaced cotton.

The farming boom below the Mason-Dixon Line has also pushed up the value of farms. Although data on durable capital stock aren't yet available, rough estimates suggest that the value of farmers' capital assets has soared as much as 75 percent since 1970.

With this thriving base of progress already at hand, and with the vast potential for growth lying in wait in untilled fields, Southern farmers may be looking at an exciting and abundant future. While all of America's farmers share a generally prosperous outlook based on conditions and potentials that affect all of them, the factors that determine the future may be especially accentuated in the South.

Four assumptions. Although projections are always iffy, ERS researchers confirm this bright outlook for American farmers—if four assumptions hold true:

- Moderate population growth.
- Low GNP growth rate of just over 3 percent a year.
- Longrun normalized trends in farm exports and environmental controls.
- A moderate increase in agricultural productivity.

If these assumptions hold, Southern production of most commodities should be up in 1985. Of the grain crops, only corn is expected to decline—by a fourth. Southern soybean output should soar at almost twice the national rate of increase, while wheat and noncitrus crops exceed national increase rates.

Livestock changes. The Southern livestock outlook is less consistent, with sharp gains expected in broiler and egg output, and a 10-percent increase in cattle and beef by 1985. On the minus side, declines may occur in sheep and lamb, hog, and milk output.

Returning to the ifs on which these outlooks hinge, the prognoses now appear good:

1. Favorable world and domestic marketing conditions, with demand pressing heavily against supply for the past 4 years, have given farmers incentive to expand production, with little government intervention to abate the growth.

2. The U.S. holds a strongly competitive position in world food markets. Although the booming export growth rate in recent years is expected to taper, a solid 3-4 percent annual gain during the next 5 or 10 years is a reasonable hope.

3. American farmers are now in good economic condition, with favorable farm income and prices, and high farm assets and proprietor equities.

The big "ifs". The most unpredictable of all ifs, however, must remain an open question: the farmer's vulnerability to the uncertainties of weather, trade, and inflation.

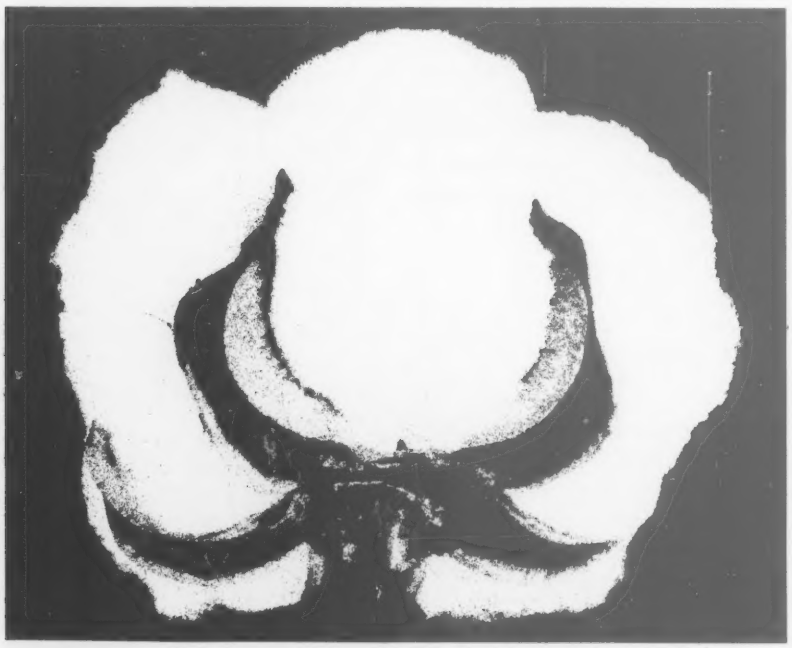
The South has responded well to the first condition by boosting production. Most major crops are now almost completely harvested mechanically, with the last major holdout, tobacco, expected to make rapid gains in mechanization.

As for exports, major Southern crops are finding ready customers abroad. More than half of the 1975 U.S. soybean crop, two-fifths of cotton output, a third of the tobacco crop, and more than half of the U.S. wheat crop was exported.

Regardless of what the future brings, the Southern farmer can relish the accomplishments already under his belt. In his lifetime, he has seen a quiet but mighty change sweep through the fields, whisking away the often disastrous domination of cotton, and replacing the old King with a prosperous, balanced, agricultural system.

[Based on the paper, "Agriculture in the South: Where It Is and Where It's Going," by John G. Stovall, Commodity Economics Division, presented to the Southern Regional Planning Committee, Atlanta, Ga., October 21, 1976.]

King Cotton: Dethroned But Not Forgotten



King Cotton no longer rules the Southland.

Without fanfare, an upstart oil crop, soybeans, ousted the old Dixie Monarch for the top spot in acreage planted.

So quietly did the decline of cotton come that it almost escaped notice. ERS experts can't identify the precise year, although the soybean ascension surely occurred within the past decade.

Despite the decline, a tombstone is hardly in order for the dethroned King. Cotton is still a major crop, with a surging demand in recent years as consumers yearn for the soft fabric touch. Total U.S. cotton acreage leaped by a fourth last year, over 1975 levels.

Yet, in the Southeast States, once the heart of his domain, cotton was allotted a mere 987,000 acres, only 42 percent of the region's 1965 cotton acreage.

The King's reign. So, belatedly, let's take a look at King Cotton's reign.

Cotton's roots go back to the Colonial South, where it graced modest plantation acreage. Because of problems in separating seeds from fiber, the crop's future seemed very limited.

Then, in 1793, Eli Whitney's cotton gin solved the problem and crowned the new King. Cotton spread rapidly across the South, ensuring the economic survival of the plantation system—and the institution of slavery.

Thus, even from its first days as ruler, King Cotton offered both prosperity and tragedy: economic salvation, on one hand, and human bondage on the other. Even as it "saved" great Southern plantations, that salvation abetted a far greater disaster.

Mixed blessings. Even before the Civil War, the King's blessings were mixed, even to plantation owners. They were totally dependent on the whimsy of King Cotton—good crops and good prices meant prosperity; poor crops and poor prices meant hardship.

After the devastation of the Civil War, the Dixie Monarch quickly resumed its rule, under an often oppressive share-cropping system. Cheap labor—both black and white—tended the fields, living in tin-roofed, tiny cropper's shacks next to the fields.

Once again, the King's whimsy decided the fate of Southern farmers, decreeing prosperity or hardship, even for the landowners.

The Cotton States. Cotton was held in awe by the people it fed and clothed, reaping praise and honor. The great John Phillip Sousa wrote "King Cotton" march, one of his most notable works. In Texas, a college football bowl was dubbed in the King's honor. The entire region became known as the "Cotton Belt" or "Cotton States." Its imprint is so etched on the Southern image that the region may forever carry the Cotton Belt identity.

Not until about 1914 did the King encounter a serious rival—a tiny immigrant from Mexico, the boll weevil. The hungry bug took to cot-

ton in such a big way that it crippled Southern agriculture for years—and still occasionally haunts the fields.

Holding the throne. Yet, even with the intruder, cotton kept its crown. In the USDA's 1921 Yearbook of Agriculture, a writer notes:

"The greatest commercial crop of the U.S. is cotton . . . Cotton is the great crop of the South. It is the chief and often almost the only source of income to a large portion of the farmers in the Southern States. It is so important that low prices or any other factor which greatly reduces the profitableness of the crop greatly disturbs the economic life of the Southern States."

But the pesky invader had stirred some rebellious thoughts among Southern farmers. As early as 1914, some were dabbling with crop diversification. Such new-fangled notions didn't spread rapidly, however. By 1926, cotton planting covered a record 44½ million acres.

Boll weevil monument. Seeds of a new Southern agriculture had been planted, however. Symbolically, an Alabama town later committed the ultimate blasphemy of erecting a monument to the boll weevil in appreciation for his ruinous appetite which spurred diversification.

In 1930, another rival began springing up. The soybean had finally reached the 1 million acres of planting mark—compared with 42 million acres of cotton that year. While most of the soybean acreage was outside cotton's Southern domain, its success spelled trouble for the King.

Diversification of another sort was well-established in the 1920's, as Southerners planted large acreages of corn as a hedge against the boll weevil, and as the premier food crop. But cotton remained the firm ruler of the South's agricultural economy.

Grip slips. King Cotton's grip on the South was, nevertheless, slipping by 1950, as other crops began squeezing cotton for field acreage. Then, the final blow came in the form of synthetic fibers, which cut sharply into cotton's long dominance of the fiber market.

By 1970, U.S. cotton acreage dropped to 11 million acres—the smallest planting since 1875, while soybeans sprawled over 42 million acres.

In 1975, in the South alone, cotton held only 7½ million acres, compared with 19 million acres of soybeans.

While cotton as a king—the dominant, single crop—may have brought as much pain as prosperity to the South, cotton as a valuable crop—part of the balanced diversity of the New South—is a strong plus for Southern farmers, netting more than a tenth of the region's income from cash crops in 1975.

Westward with cotton. Perhaps stirred by recent demands, the old King is spreading its favors westward, enticing farmers in California, Arizona, New Mexico, and Nevada, while retaining a third of all crop acreage in the Delta States, and almost 44 percent in Texas and Oklahoma.

Farmers in the four far Western States have given 13½ percent of their cropland to the Dixie charmer, increasing production to account for a third of the U.S. total last year.

The westward shift seems closely related to production costs. In 1974, it cost Southeastern farmers $240 per acre to produce cotton; Delta farmers, $214; Southern Plains producers, $138; and Southwestern growers, $406.

The Southwestern farmers, however, netted 1,015 pounds of cotton lint per acre for their high-input investment, compared with only 375 pounds per acre for Southeastern farmers, lowering production cost per pound produced to about 31 cents, compared with 57 cents in the Southeast.

Production costs. It's little wonder, then, that farmers in the Southeast—once the King's most loyal partisans—have halved cotton's percentage of total acreage since 1965, opting for crops with lower production costs.

Cotton's recent comeback stirred enough interest to net a 253,000-acre increase last year in the Southeast, and about a 1.3 million acre jump in the Delta States as U.S. consumption outpaced production so that a fifth of America's needs were met by imports from foreign nations. Yet, the 11.8 million acres of U.S. cotton in 1976 is still but a shadow of the King's past glory.

The South may never again be dominated by King Cotton, but the great fiber's identity with Southern agriculture may never diminish. After all, "Cotton States" has a far more romantic ring than "Soybean States."

[Based on special material assembled by Russell G. Barlowe, Commodity Economics Division, and the *Cotton and Wool Situation*, November 1976.]

Our Big 10 Export States

When the laurels are handed out to the States for their shares of U.S. farm exports, every State can take a bow. Some States, however, get more applause than others.

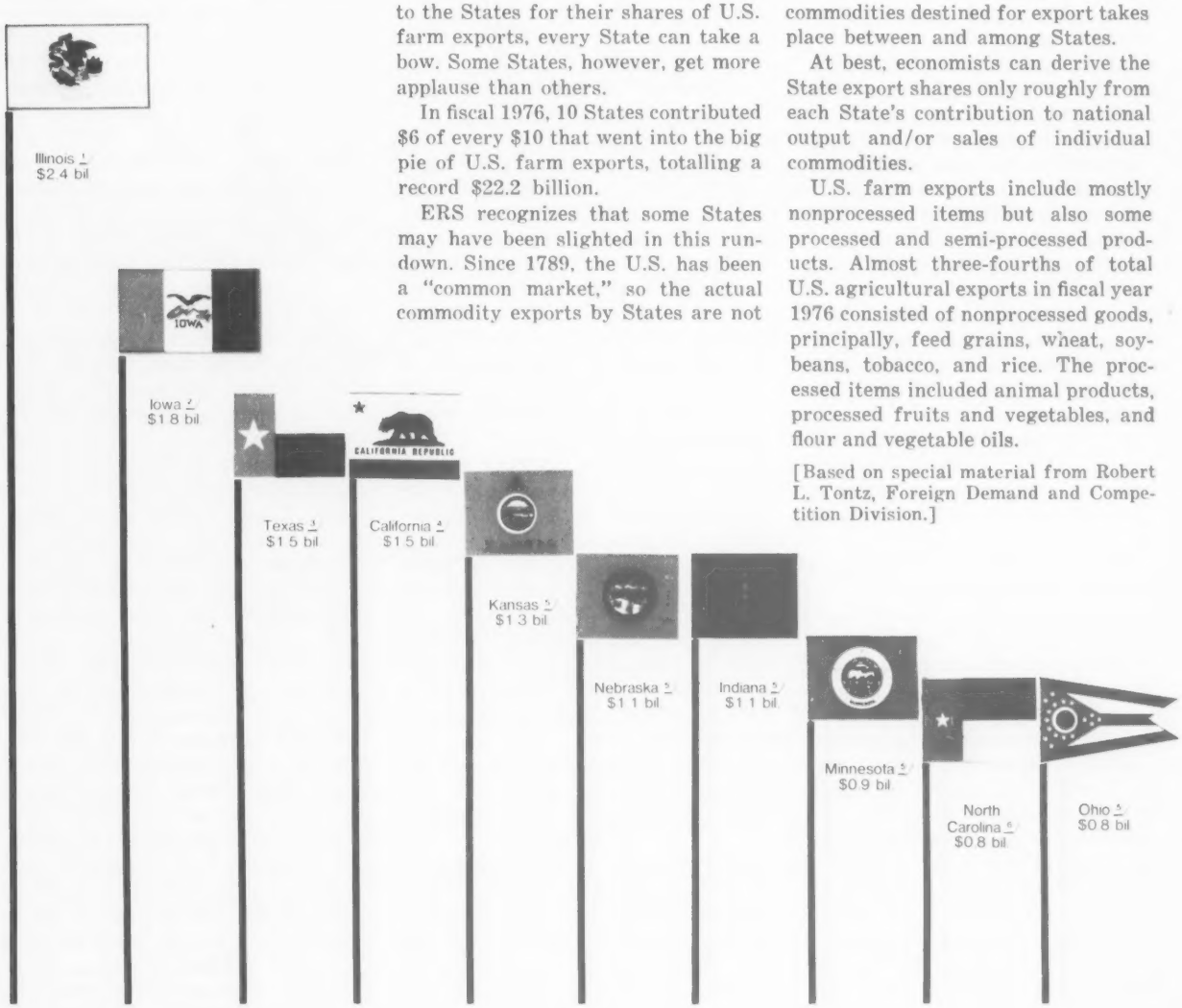
In fiscal 1976, 10 States contributed $6 of every $10 that went into the big pie of U.S. farm exports, totalling a record $22.2 billion.

ERS recognizes that some States may have been slighted in this rundown. Since 1789, the U.S. has been a "common market," so the actual commodity exports by States are not on record. A great deal of trade in commodities destined for export takes place between and among States.

At best, economists can derive the State export shares only roughly from each State's contribution to national output and/or sales of individual commodities.

U.S. farm exports include mostly nonprocessed items but also some processed and semi-processed products. Almost three-fourths of total U.S. agricultural exports in fiscal year 1976 consisted of nonprocessed goods, principally, feed grains, wheat, soybeans, tobacco, and rice. The processed items included animal products, processed fruits and vegetables, and flour and vegetable oils.

[Based on special material from Robert L. Tontz, Foreign Demand and Competition Division.]



Farm exports rounded to nearest billion, for July 1975 — June 1976. [1] Mainly feed grains, soybeans, wheat, flour. [2] Feed grains, soybeans, protein meal. [3] Feed grains, wheat, flour, cotton. [4] Fruits and preparations, cotton, nuts. [5] Feed grains, soybeans, wheat, flour. [6] Tobacco, feed grains, soybeans.

Census Update: America's Heartland

As the wraps come off the 1974 Census of Agriculture, the contents revealed thus far are pretty much what the economists expected. Farm numbers continue to drop, average size of farm units is on the rise, and annual sales show a steady climb.

For evidence of this trend, look no further than the North Central region —America's agricultural heartland, taking in the Corn Belt, the Lake States, and the Northern Plains.

The farm count in the Corn Belt was whittled 9½ percent since the 1969 census. Value of products marketed soared 91 percent per farm, and average farm size expanded 5.2 percent.

Farm numbers in the Lake States fell 8.4 percent during 1969-74, sales per farm increased 94 percent, and farm size grew 4.4 percent on the average.

The farm tally held up better in the Northern Plains—a decrease of only 5 percent—though sales per farm showed a whopping 99-percent gain. The average farm size in the Plains increased slightly less than in the other two subregions, only 4.1 percent in the 5-year period.

Eyes on the North Central. Economists will be paying special heed to farming changes in the North Central region as more data flow through the computer. Few areas of the world can boast higher farm production per man than this region. In the big U.S. picture, the role of the North Central States goes unequalled: It claims two-fifths of the Nation's farms, more than a third of the land in farms, and over half the cropland.

In 1974, the North Central region provided:

- Over 80 percent of our corn.
- Around 70 percent of the soybeans, and more than half of U.S. wheat production.
- Nearly 80 percent of hog marketings, over half the fed cattle, and over 40 percent of our dairy products and turkeys.

In the 1969-74 period, crop farmers in this region apparently fared better than livestockmen. Farm sales in all categories rose 78 percent on the average, but receipts from crops grew 174 percent during 1969-74, whereas the tally for livestock mounted just 31 percent. A good bit of the higher sales value reflected price inflation, as the U.S. index of prices received by farmers rose 80 percent from 1969 to 1974. Only marketings of wheat and soybeans—of the major crops—went up in absolute terms between 1969 and 1974.

Inflated land values. Farmers can also credit inflation as the main force behind climbing values of farm assets in the 5-year period. The price tag on land and buildings in the North Central region soared 76 percent, while the value of machinery and equipment shot up 102 percent.

In capsule form, here are some of the statistical changes in the North Central region since the last census:

CORN BELT

This subregion's five States specialize in corn, soybeans, beef, and hogs, with much of the feed crops being fed to local livestock. Between 1969 and 1974, 58,000 farms either disappeared or were no longer classified as farms by the definition of the census—bringing the Corn Belt's total farm count to somewhat under 556,000. Average farm size increased a little, since total land in farms shrank only 5 percent. All of the decrease in farm numbers came in units with 50 to 500 acres. Larger farms increased slightly —those with 500 to 1,000 acres— whereas those with 1,000 acres or more increased by half.

This may or may not have to do with the trend toward part-time farming, but uints with less than 50 acres accounted for a larger share of all farms in the Corn Belt in 1974 than in 1969—up from 17 percent to 20 percent.

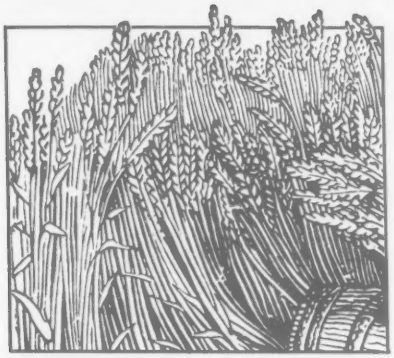
In the sales picture, farms grossing $40,000 and over more than doubled in the 5 years, and by 1974, represented nearly a fourth of the region's 556,000 farms.

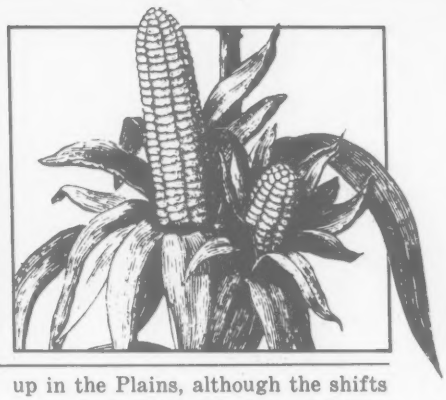
Farms selling $1,000 to $2,499 increased in number, mainly due to inflation. Those with sales of under $1,000 lost ground: They declined 70 percent during 1969-74, accounting for only 5 percent of Corn Belt farms in 1974, down from 14 percent 5 years before.

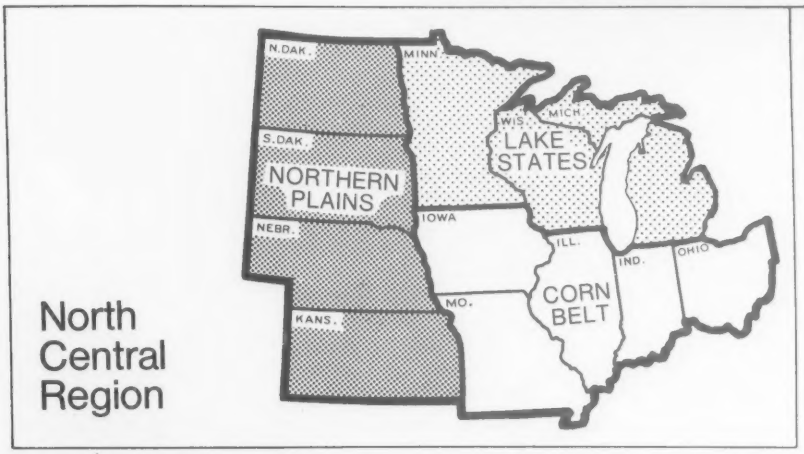
Corn Belt sales up nine-tenths. Overall, product sales in the Corn Belt rose a shade over 90 percent during 1969-74, from $16,902 per farm to $32,249. Value of land and buildings per acre went from $375 to $675—a gain of 80 percent. Production costs advanced 69 percent (from $12,738 per farm in 1969 to $21,502 in 1974), leaving net income per farm at $10,747 in 1974, up nearly 160 percent from 5 years earlier.

LAKE STATES

This is "America's Dairyland," as car tags in Wisconsin say. The Lake States lead the pack in milk production, besides providing a hefty share of the Nation's cheese and butter.







This three-State subregion also gives us much of our canning vegetables, especially sweet corn and peas, plus potatoes and sugar beets.

The Lake States reported some 263,000 farms in 1974, down from nearly 288,000 in 1969. Average farm size grew from 204 acres to 213.

Numerically, farms with more than 500 acres registered the biggest jump, particularly those with 500 to 1,999 acres. Still, farms in this class accounted for less than 2 percent of all the subregion's operations in 1974. As in the Corn Belt, farms with less than 50 acres also increased in number.

Biggest farms triple sales. By sales class, the pattern was similar. Farms selling over $40,000 worth tripled between 1969 and 1974, those in the medium sales category ($2,500-$20,000) declined in number along with the under-$1,000 class. Farms selling $1,000-$2,499, however, reported an increase.

The value of sales per farm in the Lake States more than matched the Corn Belt's leap. It was an impressive 94 percent, averaging $27,204 in 1974, up from $14,019 in 1969. The increase in production cost came to only 80 percent, thus allowing net income per farm to more than double—from $3,338 in 1969 to $8,082 5 years later.

Average value of land and buildings per acre rose from $248 in 1969 to $462 in 1974, an advance of 86 percent.

NORTHERN PLAINS

Breadbasket of the U.S., this four-State subregion grows much of our wheat, and is a mainstay of the cattle industry in terms of the lush grass and hay needed to produce high grade beef.

The Northern Plains had nearly 238,000 farms in 1974, fewer than in the Corn Belt or Lake States, but the percent decline since 1969 was also smaller (5 percent). Only a 1-percent decrease in land in farms allowed average farm size to increase 30 acres, from 734 acres in 1969 to 764 in 1974.

Some of the changes noted in the Corn Belt and Lake States also turned up in the Plains, although the shifts occurred in different sizes of farms.

For example, the gain in numbers of large farms was limited to those with more than 2,000 acres. Farms with 500 to 1,999 acres showed a decline. And the increase in the smallest size groups (under 50 acres) observed in the other two subregions also applies to the next largest group (50-179 acres) in the Northern Plains. Thus, most of the Plains' 5-percent decline in farm numbers came in the 180-499 acre class.

In common with the Corn Belt and the Lake States, the Plains reported a big jump in farm numbers at the upper end of the scale: Those selling over $40,000 worth more than doubled during 1969-74.

Average farm sales double. The value of products sold by the average farm just about doubled in the 5-year period, going from $22,653 to $45,134, a greater percentage increase than in the other two regions. Average value of land and buildings per acre also rose faster than in the Corn Belt and Lake States, from $124 in 1969 to $299 in 1974.

Production cost per farm climbed 76 percent. With product sales increasing 99 percent in 1969-74, net income per farm was up 196 percent by 1974. Plains farmers scored the highest net income of the three subregions in 1974—$12,869 per farm unit.

[Based on special material from the preliminary 1974 Census of Agriculture, by Bruce H. Wright, George W. Coffman, and Dorwin Williams, National Economic Analysis Division. Note: See December 1976 *Farm Index* for census reports on the Northeast and Mountain State regions.]

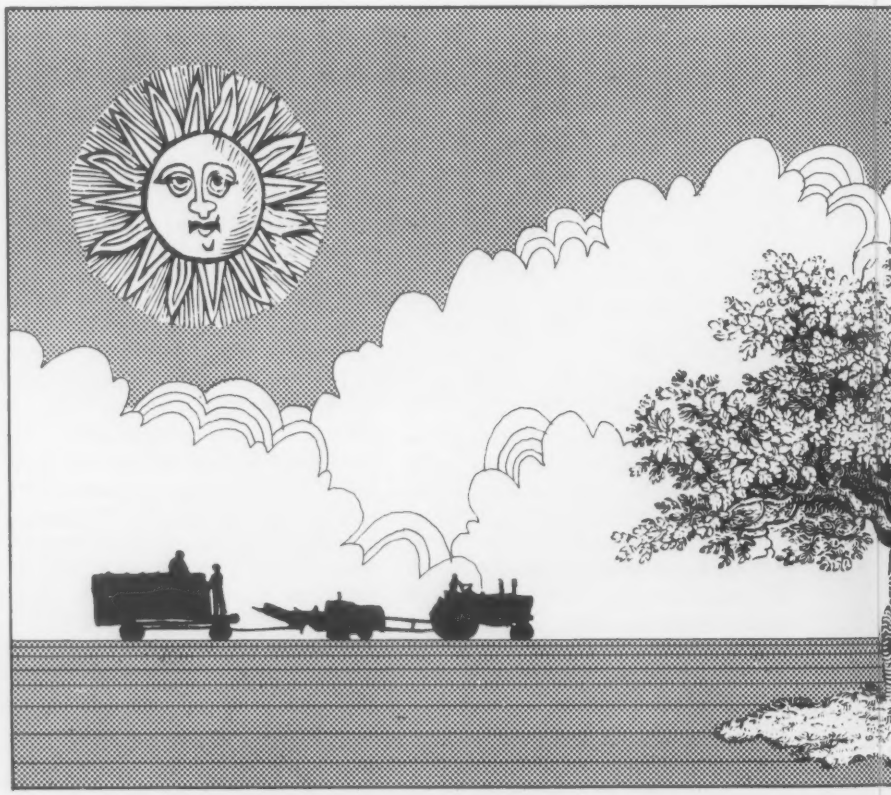
Whither the Weather?

The old adage about the unpredictableness of the weather may be even more apropos in the future, since many experts believe that world climatic changes are impending.

Such changes would have an important impact on U.S. and world agriculture. The two most popular schools of thought regarding climatic changes are:

1. There will be a continuation of the northern hemisphere cooling trend of recent decades, with a resultant loss of arable lands at higher latitudes (because of a shortened growing season) and major shifts in rainfall patterns.

2. A worldwide warming trend, resulting from atmospheric accumulation of carbon dioxide from the burning of fossil fuels, is—or soon will be—more than offsetting the cooling trend.



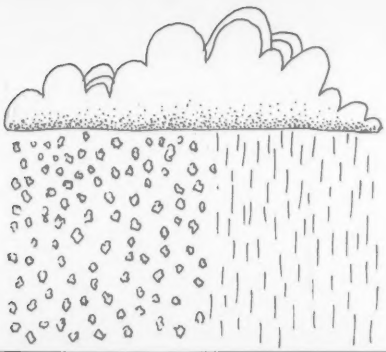
Variable weather. Whatever the specific merits of these alternatives, there appears to be a growing consensus that the climate of major crop-growing areas is likely to become more variable than it has been in the last few decades, resulting in larger year-to-year fluctuations in agricultural output.

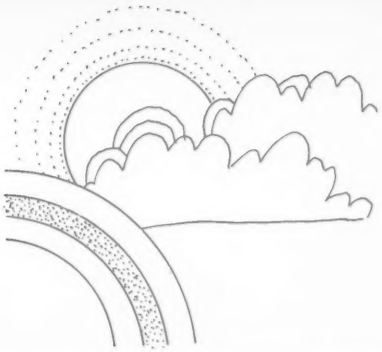
Several recent studies have focused on the problem. A June 1975 conference in Bellagio, Italy, sponsored by the Rockefeller Foundation, examined what would happen to North American agriculture should the average annual temperature decline 1 degree Celsius—probably the maximum decline over the next 20 years, even if the cooling trend of recent decades continues.

Cautious conferees. Perhaps significantly, the conference was hampered by a lack of prior research on the effects of climatic change on agriculture. Findings were prefaced with the remark that participants' comments "constitute extrapolation from limited data and informed conjecture rather than formal conclusion." With that note of caution, conferees suggested that such a drop in temperature would likely cause a southward shift in the cropping pattern with some substitution of earlier maturing varieties in certain areas.

Offsetting cooler temperatures. They agreed that some possible reduction in yields at latitudes above 45 degrees N—about where Minneapolis is situated—would probably be more than compensated for by substantial increases in regions farther south. Furthermore, if the cooler temperatures were accompanied by increased precipitation—as has usually been the case in U.S. agricultural regions—an additional net increase in yields could be expected.

If the cooling were accompanied by increased yearly variability in temperature and rainfall, average crop yields over a period of years





also would likely be affected, but the net impact could not be estimated without postulating the nature of the variations.

Drawbacks. The Bellagio participants felt that the increased variability would probably complicate the task of breeding and selecting crop varieties that are best suited to an area. They emphasized, however, that "strategies in agricultural science and technology that are designed to optimize the resistance of crops to a wide range of climatic conditions may smooth the variations in crop yields from year to year but will probably result in a reduction in total yield over a period of years."

A study by The Institute of Ecology (TIE), released in July 1976, looks at four climatic scenarios, including a description of the 1933-37 drought in the U.S. It estimates what might happen to U.S. production of corn, wheat, sorghum, and soybeans under the assumptions of constant 1973 technology and 1975 crop area.

Reduced yields. TIE calculations suggest that a repeat of the mid-1930's weather conditions, assuming the constant crop area and technology, would cause the overall yield for the four crops to fall 15-20 percent, as compared with the 1971-75 average yield. Reductions for the individual crops would range from less than 10 percent for soybeans to about 25 percent for sorghum.

At first glance, the sharper drop for sorghum than for any of the other crops seems rather surprising in view of its comparatively greater drought resistance. But this can be explained in part by its concentration in the Great Plains, an area most severely hit by the 1930's drought.

Technology to the rescue. There's no doubt that a repetition of the drought conditions of several decades ago would have a severe impact on U.S. agricultural production. But as the TIE study and others have suggested, some of the changes in technology over the past 40 years would tend to dampen the adverse effects.

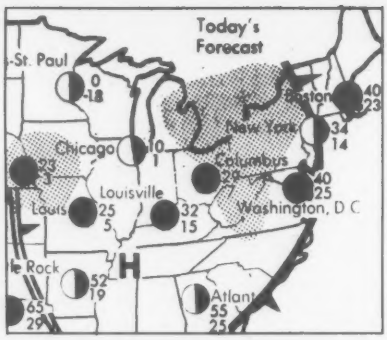
Additionally, about two-thirds of the corn and one-fourth of the sorghum produced in the Great Plains today are irrigated, compared with almost none in the 1930's. Also, grain sorghum was an insignificant component of feed grains during the drought years, while today it's a major feed grain crop. Since it's strongly drought resistant, it tends to make feed grains as a whole more resistant.

Major implications. Although the TIE estimates may be debatable, a repetition of a mid-1930's drought scenario in the U.S. (or significant changes in climate in other major grain-producing countries, or substantial increases in the year-to-year variability of weather over an extended period of years) would have major implications for U.S. policies on a number of issues, including the "world food gap" and the need for reserves.

USDA has made some analyses of these problems. For example, the analysis on grain reserves assumes that deviations in future world grain production occur randomly, and that the degree of variability will be the same in the future as in recent decades.

More reserves? If these assumptions are wrong, then USDA's estimates of the amount of grain reserves needed to meet a given level of annual world consumption with a stated probability are also wrong. If grain production should become more variable in the future, then more reserves would be required.

By the same token, if the process is not random, as assumed in the analysis, then it's also likely that the level of reserves needed to meet consumption will change.



As long as man remains unable to predict future weather, the controversy and conflicting opinions on the issue of climatic change and variability will continue.

Judgment forecasts. What is needed now, according to an ERS economist, "are expert judgment forecasts—subjective though they may be—on some of the controversial issues relating to possible changes in climate and its variability, and how they might impact on agriculture or other sectors of the economy."

USDA is continuing its statistical analysis of crop yields around the world—particularly grain crops—including the measurement of trends, variances, bunchiness, and patterns (both time and geographic).

Since the yield series for foreign countries cover only the period since the early 1950's (or later), the Department has contracted with the Department of Atmospheric Sciences at the University of Missouri to assemble a meteorological data base for major agricultural regions of the world and carry out some statistical analyses of the data.

Evaluations. Appraisals will be made of the occurrence of favorable or unfavorable weather during the same year for different crop production areas of the world. The research will try to determine whether meteorological phenomena show discernible nonrandom relationships—for example, consistent trends or variabilities in time and space.

USDA is also participating in a joint research project at the National Defense University at Fort McNair, Washington, D.C. The study is concerned with possible changes in climate, its variability, and the effects on U.S. and world food production and other related areas affecting national policy to the year 2000.

Policy options. Within the time and resource limitations of this project, USDA will begin to outline and evaluate a range of policy options for coping with the consequences of climatic change and variability.

Such scenarios would help define a range of national policy issues (such as the level of food reserves, agricultural land use, foreign aid, economic interdependencies, etc.) that might have to be confronted by policymakers in response to possible changes in climate and food production.

[Based on a speech by Joseph W. Willet, Foreign Demand and Competition Division, at the National Agricultural Outlook Conference, Washington, D.C., Nov. 16, 1976. The paper was prepared jointly with William R. Gasser, FDCD, presently detailed to the Research Directorate, National Defense University, Washington, D.C.]

The Trouble with "Normal" Weather

Now that most researchers agree that the world's climate may become more unpredictable than ever, just what's being done to improve forecasts of agricultural impacts from weather?

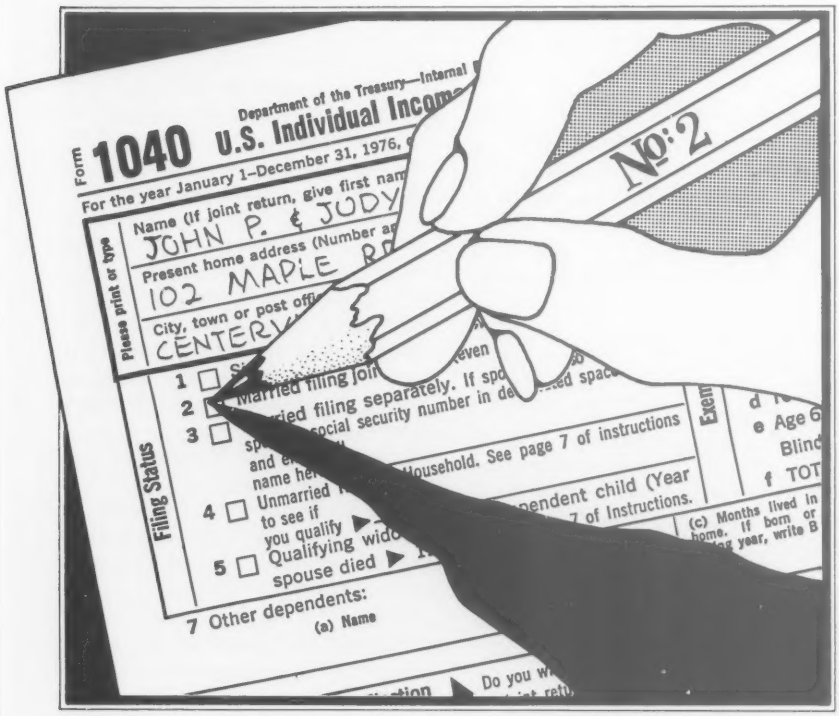
Unfortunately, not as much as ERS researchers might hope for. Most short-run forecasts and long term projections of crop production made today don't incorporate these possible future changes in climate, although projections are increasingly offering alternative scenarios, or at least ranges, in recognition of the problem of variability.

USDA and others have been criticized for using a phrase such as "assuming normal weather" in their projections. Critics claim that for some crop-growing areas, the weather for the 30-year period—1940-70 (on which present weather "normals" are based)—was actually abnormally good, with relatively low variability, when compared with data from a longer time series.

Complaints also center on two other major points: first, that it is very hard to find even a small sample of crop seasons in which precipitation and temperature values are within a reasonably narrow range of "normal," and second, that at least in some major grain-producing areas, "normal" weather appears to be associated with higher than average yields.

Agreeing that the term "assuming normal weather" is not very precise, an ERS economist believes, however, "that most analysts who use that term are not so naive as to assume that weather variables will be precisely at the 30-year 'normal' over the extended area and time period covered in the projections. . . . In essence, lacking a better basis for judgment, he (the analyst) is assuming that future weather, including its variability, will be generally such as to keep crop yields near the levels of the recent past, as adjusted for likely changes in technology, inputs, and acreage."

Less Taxing Times for Farm Heirs



The first major revisions of the Federal estate and gift tax laws in more than 30 years could mean family farms will be bolstered.

The Tax Reform Act of 1976, passed last September, may relieve some of the tax burden that has sometimes frustrated efforts to pass a family farm from one generation to another through inheritance.

Editor's Note: This article is not meant to anticipate rulings by the Internal Revenue Service, some of which could affect the impact of the Tax Reform Act of 1976.

Since the 1920's, the number of family farms has dwindled. Social factors played a major part in breaking up homesteads, but so did Federal estate and gift tax laws, especially in recent years.

Some farm families were forced to sell the farm to pay the estate taxes, even though they wanted to continue farming on the same land.

More equitable taxes. The intent of Congress in passing the Act was to make the estate and gift tax burden on farmers and others more equitable, and to end the forced sales of family farms.

To achieve these goals, changes include:

- Removal of the incentive for "deathbed transfers."
- A new system for determining the value of farmland for estate tax purposes.
- Easing of the "widow's tax."
- Liberalizing payment schedules for farmers' estate taxes.

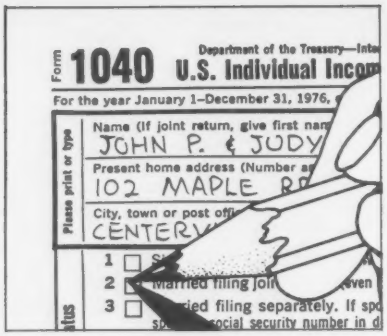
The reforms do not, in all cases, result in lower taxes. Although most taxpayers will pay less, wealthy taxpayers may pay more. Legislators did not intend to write a blanket tax cut bill. A complicated example lies in the gift and estate taxes, and "deathbed transfers."

Deathbed transfers. Gift taxes were generally lower than estate taxes, so property owners would often make gifts of property rather than bequeathing it, in anticipation of death —a so-called "deathbed transfer."

Not all such transfers actually took place on the deathbed, but many were made later in life. Under the old law, any gift given in anticipation of death within 3 years prior to death would be figured in as part of the gross estate. Still, "deathbed transfers" were not uncommon. Many people said the gifts were for reasons other than "in anticipation of death" to avoid estate taxes.

The new law doesn't deal with the question of a person's intent in giving a gift. Any gift given within 3 years prior to death is counted as part of the estate. Even so, another provision removes the incentive for making such gifts.

A single rate. Estates and gifts are now taxed on the same basis, on a unified rate schedule. The new rates



are applied to all property transfers, whether gifts, or bequests made at time of death. While it can increase the amount of taxes owed on the larger estate, the new rate schedule can, in most cases, substantially reduce the amount of estate taxes.

Besides the tax reduction, heirs of a small family farm, along with other taxpayers, also benefit from a new tax credit—the biggest single tax break in the estate and gift tax revisions.

Using this credit, estate tax liabilities can be reduced by $30,000 this year (the tax credit will escalate gradually to $47,000 in 1981), assuming the decedent never used the tax credit before.

As an example, if the taxes on an estate are determined to be $33,000 and if the new credit had never been used, $30,000 could be subtracted from the bill, leaving a balance owed of $3,000.

A dual role. Another wrinkle to the new tax credit is that it applies to both gift and estate taxes. This allows a person to reap the tax advantage while still alive, by applying it to gift taxes. Of course, the amount that has been used as a gift tax credit can not be used again for the estate. To illustrate: if a person applies $20,000 of the new credit applied to the gift tax, only $10,000 of the new credit could be subtracted from the estate tax liability.

A word of caution, though: The $30,000 tax credit is not refundable. If all the tax credit is not consumed by gift or estate taxes, it does not mean the inheritors will get whatever remains.

How It Works

Suppose a farmer dies in 1977 and leaves an estate of $400,000 (after all debts and estate administration fees are paid) to his wife. The estate is entitled to use the marital deduction, now $250,000. Thus, the estate has a tax liability of $150,000. According to the new estate tax schedule, the tax is $38,800. But if the farmer had made no earlier use of the new tax credit, $30,000 may be deducted, leaving a tax liability of $8,800.

This amount will vary on different estates of the same value, depending on the value of gifts previously granted, and on the year the estate is filed. State laws will also vary, but overall, there has been a substantial saving.

Under the old law, under the same circumstances, the tax liability would have been nearly $33,000.

[From "Provisions of Importance to Agriculture in the Tax Reform Act of 1976," by Charles A. Sisson, National Economic Analysis Division.]

Thus, the new law still points up the importance of estate planning. With proper planning, taxpayers can ensure that they and their descendants will enjoy all available tax breaks.

Farmland valuation. Estate planning takes on somewhat different aspects with the new estate valuation procedures. Farmland used to be valuated at time of transfer according to its market value. At times, this resulted in descendants paying more in taxes than the land was worth to them.

For example, suppose a farm sat in the path of a proposed shopping center. The land may be worth millions on the open market, but only earn a modest living for the farmer. For these reasons, a few farm families sold farms to pay the estate taxes. The new law recognizes the problem.

Now, providing certain conditions are met—such as bequeathing the farm to a family member who actually had helped farm it, and providing at least a quarter of the estate is actually a farm—the new valuation procedures can be applied to farm estates.

Taxing the gains. Deeply involved also in estate taxes is the question of capital gains—the increase in value of property between the time land is acquired and the time it is sold and a profit is realized.

Under the old law, such capital gains were not taxed at all unless they were realized, which meant an heir would have to sell farmland before it could be taxed.

Even then, the capital gains was the difference in value between the time the heir received property and the time the property was sold, ignoring the value of the farmland when it was originally acquired. Under this system, $15 billion a year in capital gains fell outside the income tax system.

More taxes levied. The new law taxes such farmland at the time the capital gains are realized, and taxes all capital gains accruing after January 1, 1977. In the end, then, capital gains will be taxed more. The accounting used for determining the tax is a "straight line system" that

doesn't change from one transfer to another, thus it's more equitable.

The provisions for inherited bonds and securities in the new law are different from the rules governing farmland. Also, the change is not meant to apply to smaller estates.

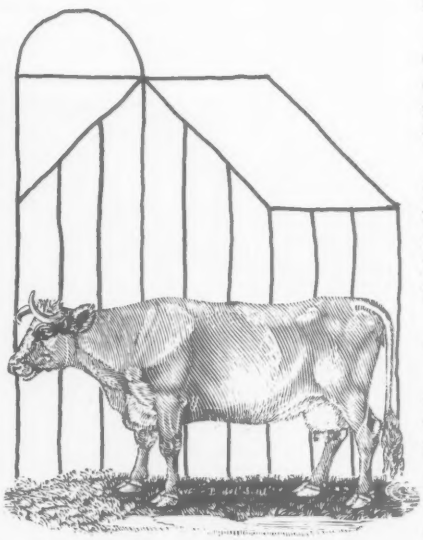
This change could mean that there will be less incentive for inheritors to sell off property as soon as they get it, or break it up. In many cases, though, the widowed spouse will be the person who makes the decision.

The widow's tax. In the past, widowed spouses have had to pay estate taxes on an inheritance they considered at least partly theirs before the death of the spouse. Women were most affected, hence the term "widow's tax." It was held grossly unfair by many farm wives.

It worked this way: If a farmer died and left his estate to his wife, she would have to pay estate taxes on about half of it—minus $60,000 automatic exemption—even though she had worked as a full partner on the farm and considered the inherited property already hers. The new law recognizes the special situation of farm wives.

Easing the burden. Now, a farm wife may be left up to $250,000 or half the estate (whichever is larger), tax free. Estate taxes are paid on the remainder of the estate, minus the usual tax reductions for estates. One catch: the amount of special "marital deduction" is limited to the value of the estate actually received by the widowed spouse. These changes are not all that farm wives had asked for, but their problem is eased.

Another tax problem facing both widowed spouses and other descendants is paying the estate taxes. Farmers have almost always held a special place in the Federal tax codes. They've had two ways to pay the taxes: (1) at time of transfer; or (2) for "undue hardship" reasons, payment could be delayed for up to 10 years, at market interest rates.



Lack of interest. The new law allows three payment schedules: (1) at transfer; (2) delay up to 10 years for "reasonable cause," at market interest rates if the farm makes up at least 35 percent of the gross estate; or, (3) delay up to 15 years at 4 percent interest (applied to the first $1 million only) "for reasonable cause," if the farm comprises at least 65 percent of the gross estate—far below the market interest rate. The "reasonable cause," however, need not be explained; it is simply assumed to be the condition for the holders of the estate.

A "meaty" bill. While many farmers view these revisions as the meat of the Tax Reform Act of 1976, many other changes affect farmers, too. For example:

- The rules governing "Subchapter S corporations"—the kind many farmers establish—now allow a maximum of 15 stockholders, rather than 10, providing certain conditions are met.
- Income taxes are generally reduced, and tax tables are simplified.
- The 10-percent investment tax credit for business has been extended through 1980. Under this provision, businesses—including farms—may deduct from their final tax bill up to 10 percent of the cost of newly acquired equipment.
- New minimum and maximum taxes are established. Now, very few people will be able to avoid paying taxes. The new law also places a maximum tax rate on income, to keep income taxes from discouraging productivity.
- Livestock owners who were forced to sell off their stock because of drought may be eligible for tax relief for the income derived from the sales.

These and other changes in the Tax Reform Act would require a volume larger than the law itself—it's over 1,500 pages long—for any detailed explanation. The local Internal Revenue Service office should be consulted for questions.

[Based on "Provisions of Importance to Agriculture in the Tax Reform Act of 1976," by Charles A. Sisson, National Economic Analysis Division.]

Commodity Profile

Goober Growing Isn't Peanuts

Americans gobbled goobers at the rate of 9 pounds per person last year in a myriad of forms—peanut butter, candy, salted, or just plain roasted peanuts.

All told, a veritable mountain of about 370 million pounds of salted peanuts, and 130 million pounds straight from the shell, were consumed.

But the biggest use of all was for peanut butter. Americans ate more than 866 million pounds of peanuts processed into peanut butter last year—nearly half the amount of peanuts used for food.

Nutritious spread. Peanut butter's popularity has mostly been bounded by the North American shores, although pound for pound it has more protein, minerals, and vitamins than beef liver; more fat than heavy cream; and more food energy (calories) than sugar.

But now peanut butter is spreading overseas. Thanks to a joint promotional campaign sponsored by the Foreign Agricultural Service (FAS)—charged by Congress with developing foreign markets for U.S. agriculture—and the private National Peanut Council, the number of foreign peanut fans is growing.

The push for overseas markets was stimulated by a growing domestic surplus. Peanut producers are growing goobers faster than Americans can eat them, so the industry and the FAS teamed up to spur peanut butter purchases in foreign countries.

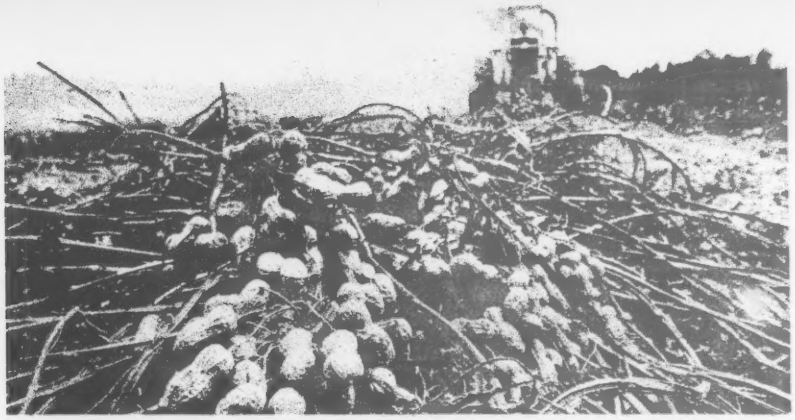
Japanese success story. The greatest success has been in Japan. After a 2-year promotional campaign, Japanese are starting to buy peanut butter in quantity. Before the intense campaign, waged by a Japanese advertising firm, shoppers preferred sweet peanut cream, which contains less peanuts than peanut butter.

The shift to Japanese peanut butter—sweeter and lighter than that sold in the U.S.—was accomplished through newspaper and magazine advertisments to attract shoppers and inform the people involved in the school lunch program. Another facet of the campaign concentrated on in-store promotion, and offering free peanut butter samples to shoppers.

The big jump. As a result, Japanese imports of peanut butter rose from 181,000 pounds in 1973, to 813,000 pounds in 1975, and the climb continues.

During the same 2 years, Japanese imports of other forms of U.S. peanuts also rose. Shelled peanut imports increased from 37.5 million pounds to 39 million, while unshelled imports jumped from 1.4 million to just under 7 million pounds.

In perspective, however, the foreign demand for peanut butter is still relatively minor, accounting for less than 2 percent of U.S. peanut output.



The FAS campaign has also progressed in other countries. Several in western Europe are showing new-found interest in peanut candies, almost unknown outside North America until recently.

High priced goobers. These new purchases of U.S. peanuts came despite the higher price normally paid for them. The reason for the higher price tag on American goobers is the quality control and testing they undergo. Peanuts are grown in about 50 other countries, but only a few export edible grade peanuts, and the U.S. is one of the leaders.

This growing foreign demand for U.S. peanuts comes at an opportune time. America has a billion pound domestic oversupply.

The Commodity Credit Corporation (CCC)—which acts as the Federal Government's agent in buying surplus peanuts—is trying to sell that stockpile now. The surplus from the 1975 crop, which is mostly oil or destined to become oil, will be sold domestically, or given away in Federal food programs. The 1976 crop, which is still coming in, could reach 3.7 billion pounds. ERS estimates that the CCC will acquire a fourth of this crop, adding to the surplus. The CCC may export a portion of its 1976 crop purchases.

Acreage parcelled out. The agency buys the excess peanuts as part of the Federal peanut price support program. The Government allots acreage for peanuts (about 1.6 million acres a year since 1956) and buys peanuts grown on the allotment but not sold on the open market. The support price is 75 percent of parity, a price set by USDA based on a formula using the 1910-14 peanut crop prices.

By controlling acreage, and guaranteeing a market for peanuts grown on that acreage, the program has not only supported grower prices, but stimulated research to boost yields. The research has more than doubled yields, from 1,232 pounds an acre in 1960, to the record 2,565 pounds in 1975.

The foreign market has been too small to absorb the huge excess. Only 12 percent of the U.S. production was shipped in 1975, and that share is expected to drop for the 1976 crop. The drop is attributable to increased foreign competition, a large U.S. surplus available from previous years, and other factors.

Peanut prices boosted. The increased U.S. production has been paced by increased values, reflecting the higher mandatory support prices paid by the CCC. In 1960,

Cont. on p. 20

COMMODITY PROFILE: PEANUTS

Production	The U.S. output was 3.7 billion pounds in 1976, about 30 percent of the world total.
Average production costs	U.S. farmers paid 9.1-9.8 cents a pound in 1976.
Average prices received	The prevailing 1976 price was about 20 cents a pound.
Average yield	The yield was 2565 pounds an acre in 1975, 2428 in 1976.
Value	The total U.S. farm value was $759 million in 1975.
Leading States	Georgia, Alabama, Florida
Foreign trade	The U.S. exported 435 million pounds in 1975.
Trends	Expansion of demand could continue and may accelerate if foreign markets develop.

Wizard of Tuskegee

The peanut might have been a forgotten southern plant had it not been for the efforts of the "Wizard of Tuskegee," George Washington Carver.

In Dr. Carver's opinion, the heavy reliance of southern farmers on one crop—cotton—for their livelihood spelled serious trouble for southern agriculture. Especially after the first attacks of the boll weevil left many farm families penniless, the need for alternate crops that would provide a livelihood and not deplete the soil became evident.

Carver set out to find a cure for cotton's excesses. He found that cotton used huge amounts of nitrogen in growing, and added little to the soil. The peanut stirred his imagination.

The peanut was the little crop grown for generations by poor farmers. Carver found that it adds nitrogen and other nutrients to the soil, and thrives in the hot southern sun. With proper techniques, Carver found that the peanut can produce high yields.

His next job was to create a market for southern peanuts. The best way to do this was to prove to buyers that the peanut—or goober, monkey nut, groundnut, or any of a half dozen other names—is a valuable product.

He already knew, of course, that some farmers had been using the peanut for food and fodder, and for things northern farmers never imagined. So, Carver developed these uses and found more.

He told farmers there are over 300 uses for the little plant, including 18 ways to cook the raw seed. In his laboratory at Tuskegee Institute, Carver developed peanut linoleum, paint, dye, medicine, beauty cream, shoe polish, and shampoo. Food uses include peanut cheese, mayonnaise, shortening, chili sauce, and mock chicken.

His peanut soup is still eaten today, but probaby the most dramatic food use for peanuts was in peanut milk. This Carver discovery is credited with saving the lives of thousands of African infants, when no other food was available to them.

But Carver's work went far beyond the peanut. He was a teacher, agronomist, botanist, mycologist, and award-winning painter.

Mycology—a form of botany concerned with plant fungi—was the basis for much of Carver's work with USDA. He was also associated with the Division of Agrostology, improving grasses grown in the Nation's heartland. He worked with USDA off and on until his death in 1943.

Despite all this, the work Dr. Carver is most remembered for remains the peanut. His discoveries helped lead the South away from the rule of King Cotton, and toward a more prosperous future.

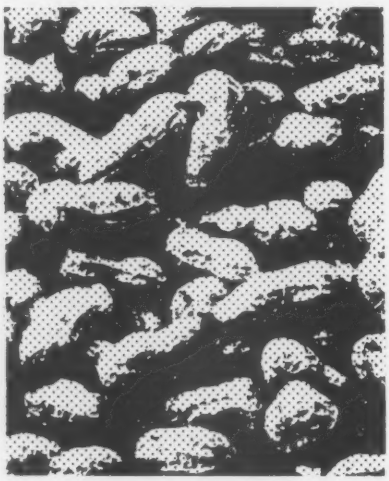
[Based on special material provided by Wayne D. Rasmussen, National Economic Analysis Division.]

Cont. from p. 19

farmers sold $168 million worth of peanuts, getting about 10 cents a pound. By 1975, these sales had reached about $750 million, averaging more than 19 cents a pound.

Production costs averaged about 10 cents a pound last year, depending on location and other variables, thus leaving an enticing profit potential. But some problems persist:

• Congress will consider new agriculture legislation this spring, and could include provisions affecting peanut programs.



• Rising labor costs worry many farmers. Peanut farming is highly mechanized, but many farmhands are still needed to get the crop in, and these costs have been trending upward. For example, labor costs at peanut operations have increased from a U.S. average of $15.68 per acre in 1974, to an estimated $18.68 last year. These costs are expected to continue climbing.

• Machinery costs have also risen. Total ownership costs in 1974 were an average $26.91 an acre. They increased to a projected $33.92 an acre last year.

• Fertilizer, pesticides, and other chemical prices have increased dramatically since petroleum product prices soared in 1973. The chemicals, especially fertilizer, were in short supply a few years ago, but supply problems have eased, at least for now.

• Some 290 million pounds of peanuts went into peanut candy in 1974, but candy consumption has dipped, and may dip some more.

Spreadable, edible uses. Despite the candy drop, other uses should hold their own for a while. Demand for items such as peanut oils, shortening, and margarine will probably remain steady. Overall, ERS expects the use of peanuts for food to increase marginally (about 4 percent in 1976/77) in the U.S.

Domestic use is hemmed in somewhat, so foreign markets loom as needed outlets. Although the FAS peanut butter promotion is encouraging, it's still too early to tell how big its impact will be on foreign demand.

Meanwhile, U.S. peanut farmers will keep an anxious ear cocked for munching from across the sea, and fingers crossed as Congress ponders new agricultural legislation.

[Based on a background paper prepared for the Senate Agriculture Committee by Alan S. Walter, Commodity Economics Division; and on special material from James F. Lankford, Foreign Agricultural Service.]

All the Tea in China

"All the tea in China" in 1976 may be one of the best harvests ever in that ancient land of tea production.

Available records indicate 1976 was such a good year for the tea crop in the People's Republic of China (PRC) that it may even have surpassed the 1975 crop, which was probably a record, ERS researchers estimate.

And of course a record crop bodes well for tea drinkers all over the world. A producer of 19-20 percent of the world's tea supply, China ranks among the top five tea exporters.

According to the PRC, the spring 1976 tea harvest was excellent, with four of the major producing provinces turning out 20 percent more than in 1975. Four other provinces showed a 10-percent increase.

Although a good spring harvest may mean a good year overall, it's hard to tell. Chinese leaders tend to be tightlipped about crop production there, and U.S. analysts don't know what portion of the total tea crop is harvested in the spring. Still, signs pointed to a good 1976 tea crop.

Eight out of 15 tea-producing provinces claimed that the spring crop ranged from "good" to "bumper". While these claims are not sure commodity indicators, they are considered acceptable evidence of at least normal production levels.

The statements take on added significance because the PRC refers to the 8 provinces as major or leading producers, indicating they must make up a fairly large portion of the total tea harvest.

If this crop is as good as the PRC officials say, it is in spite of an exceptionally cold spring in the major producing provinces—the same cold spring which dimmed Chinese hopes for record harvests for most other crops.

Official Chinese policy is to remain independent by importing only needed technology and raw materials, and exporting other commodities to keep trade balanced. A large tea crop could certainly help some in the effort.

U.S. imports of Chinese tea have risen rapidly in recent years. Since the first full year of U.S.-PRC trade in 1972, the American thirst for the product increased 5.5 times—from 380 tons to 2,090 tons in 1975.

[Based on special material from Carolyn L. Whitton, Foreign Demand and Competition Division.]

Recent Publications

Single copies of the publications listed here are available free from The Farm Index, Economic Research Service, Rm. 1664-So., U.S. Department of Agriculture, Washington, D.C. 20250. However, publications indicated by (*) may be obtained only by writing to the experiment station or university. For addresses, see July and December issues of The Farm Index.

World Economic Conditions in Relation to Agricultural Trade. WEC-11.

These articles discuss world trade activity, discussing the strong first quarter of 1976, according to the Organization for Economic Cooperation and Development (OECD). OECD has also predicted the recovery in world agricultural trade will continue into 1977.

The American Farmer. The Economic Research Service in cooperation with the Office of Communication , USDA.

A collection of articles from *Farm Index* magazine, January 1975-January 1976, this book retraces the history of the American farmer. In a forward to the 102-page volume, ERS Administrator Quentin M. West writes, ". . . as we examine our past in this Bicentennial year, this booklet will help put in perspective the farmer's contribution to our national heritage, and the role he plays in the economy of today."

For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Price: $2.35 per copy; 25 percent discount allowed on orders of 100 or more to one address.

Periodicals 1977. Economic Research Service and Statistical Reporting Service.

A compilation of magazines, reports, bulletins, and other periodicals issued throughout the year by SRS and ERS, this publication includes a synopsis of each of the publications, and information on how to order.

Impacts of Recreation Subdivisions in the South-Central Mountains of Colorado. Herbert Hoover, National Resource Economics Division.

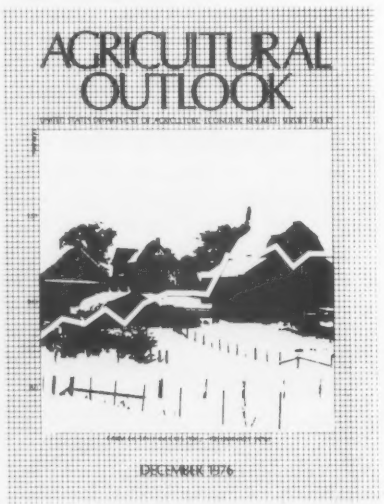
In this area of Colorado, much of 75,000 acres has been subdivided and developed into home lots. The impacts—environmentally and economically—on the area, and the attitudes of the individual lot owners, are discussed and evaluated in this report.

Available from the National Technical Information Service, 5285 Port Royal Rd., Springfield, Va. 22161. Price: $4.50 per paper copy; $3.00 per microfiche copy. Specify AGERS No. 21.

1977 U.S. Agricultural Outlook. Papers presented at the National Agricultural Outlook Conference, Nov. 15-18, 1976, compiled for the U.S. Senate Committee on Agriculture and Forestry.

All the papers and speeches that made up the body of the Agricultural Outlook Conference are contained in this 445-page book, with a forward by the Honorable Herman E. Talmadge (Georgia), committee chairman. Available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Price: $3.85.

Who Reads Ag Outlook?



People who need the latest intelligence available on the agricultural economy. For the best official outlook and situation analysis, tune into USDA's comprehensive monthly, *Agricultural Outlook*. Share the why's and wherefore's of current developments in timely, no-nonsense briefings. Size up future uncertainties with our latest forecasts. For an aggregate picture, *Agricultural Outlook* puts it all together: the ag economy, commodities, food & marketing, inputs, farm policy, and trade prospects. Plus special articles and priceless tables of the statistical indicators you follow each month—all at your fingertips.

Write today for a complimentary copy and subscription information. Send your name & address to: *Agricultural Outlook*, IND-01, Room 453 GHI Bldg., ERS-USDA, Washington, D.C. 20250.

Economic Trends

[1] Ratio of index of prices received by farmers to index of prices paid, interest, taxes, and farm wage rates. [2] Average annual quantities of farm food products purchased by urban wage earner and clericalworker households (including those of single workers living alone) in 1959-61—estimated monthly. [3] Annual and quarterly data are on 50-State basis. [4] Annual rates seasonally adjusted third quarter. [5] Seasonally adjusted. [6] As of March 1, 1967. [7] As of March 1, 1975. [8] As of February 1, 1976. [9] Beginning January 1972 data not strictly comparable with prior data because of adjustment to 1970 Census data.

Source: U.S. Dept. of Agriculture (Agricultural Prices, Foreign Agricultural Trade and Farm Real Estate Market Developments); U.S. Dept. of Commerce (Current Industrial Reports, Business News Reports, Monthly Retail Trade Report and Survey of Current Business); and U.S. Dept. of Labor (The Labor Force and Wholesale and Consumer Price Index).

Item	Unit or Base Period	1967	1975 Year	1975 Nov.	1976 Sept.	1976 Oct.	1976 Nov.
Prices:							
Prices received by farmers	1967=100	—	186	184	187	178	173
Crops	1967=100	—	201	189	204	195	187
Livestock and products	1967=100	—	172	181	172	165	162
Prices paid, interest, taxes and wage rates	1967=100	—	181	184	195	194	193
Family living items	1967=100	—	166	171	178	179	180
Production items	1967=100	—	182	184	197	195	194
Ratio [1]	1967=100	—	102	100	96	92	90
Wholesale prices, all commodities	1967=100	—	174.9	178.2	184.7	185.2	185.6
Industrial commodities	1967=100	—	171.5	175.4	184.7	186.3	187.0
Farm products	1967=100	—	186.7	191.7	191.8	186.6	183.6
Processed foods and feeds	1967=100	—	182.6	182.6	177.1	174.9	174.8
Consumer price index, all items	1967=100	—	161.2	165.6	172.6	173.3	173.8
Food	1967=100	—	175.4	179.8	181.6	181.6	181.1
Farm Food Market Basket: [2]							
Retail cost	1967=100	—	173.6	177.8	174.8	174.4	173.1
Farm value	1967=100	—	187.0	188.0	175.5	169.0	169.4
Farm-retail spread	1967=100	—	165.3	171.3	174.4	177.8	175.4
Farmers' share of retail cost	Percent	—	42	41	39	38	38
Farm Income: [3]							
Volume of farm marketings	1967=100	—	115	157	130	167	161
Cash receipts from farm marketings	Million dollars	42,817	89,563	10,115	8,432	10,411	9,700
Crops	Million dollars	18,434	46,661	3,954	4,498	6,288	5,800
Livestock and products	Million dollars	24,383	42,902	6,161	3,934	4,123	3,900
Realized gross income [4]	Billion dollars	49.9	98.2	—	104.8	—	—
Farm production expenses [4]	Billion dollars	38.2	75.5	—	81.2	—	—
Realized net income [4]	Billion dollars	11.7	22.7	—	23.6	—	—
Agricultural Trade:							
Agricultural exports	Million dollars	6,380	21,894	2,176	1,797	2,251	2,121
Agricultural imports	Million dollars	4,452	9,328	805	914	811	972
Land Values:							
Average value per acre	Dollars	[6]168	[7]354	380	[8]403	—	445
Total value of farm real estate	Billion dollars	[6]182	[7]370	—	[8]421	—	—
Gross National Product: [4]	Billion dollars	796.3	1,516.3	—	1,709.8	—	—
Consumption	Billion dollars	490.4	973.2	—	1,088.5	—	—
Investment	Billion dollars	120.8	183.7	—	247.0	—	—
Government expenditures	Billion dollars	180.2	339.0	—	369.6	—	—
Net exports	Billion dollars	4.9	20.5	—	4.7	—	—
Income and Spending: [5]							
Personal income, annual rate	Billion dollars	626.6	1,249.7	1,300.2	1,391.7	1,402.9	1,417.8
Total retail sales, monthly rate	Million dollars	26,151	48,702	50,552	54,100	54,669	55,583
Retail sales of food group, monthly rate	Million dollars	5,759	10,977	11,250	11,774	11,890	11,977
Employment and Wages: [5]							
Total civilian employment	Millions	74.4	[9]84.8	[9]85.2	[9]87.8	[9]87.8	[9]88.1
Agricultural	Millions	3.8	[9]3.4	[9]3.3	[9]3.3	[9]3.3	[9]3.2
Rate of unemployment	Percent	3.8	8.5	8.5	7.8	7.9	8.1
Workweek in manufacturing	Hours	40.6	39.4	39.9	39.7	39.8	40.1
Hourly earnings in manufacturing, unadjusted	Dollars	2.83	4.81	4.93	5.31	5.28	5.35
Industrial Production: [5]	1967=100	—	117.8	123.5	130.9	130.4	132.0
Manufacturers' Shipments and Inventories: [5]							
Total shipments, monthly rate	Million dollars	46,449	82,724	86,515	93,864	93,592	—
Total inventories, book value end of month	Million dollars	84,655	146,574	146,671	154,614	156,077	—
Total new orders, monthly rate	Million dollars	46,763	81,351	86,351	93,566	94,274	—

☆U.S. GOVERNMENT PRINTING OFFICE:1977 241-415/2 1-3

UNITED STATES GOVERNMENT PRINTING OFFICE
DIVISION OF PUBLIC DOCUMENTS, WASHINGTON, D.C. 20402
OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE $300

POSTAGE & FEES PAID U.S. DEPT. OF AGRICULTURE AGR 101

U.S.MAIL

First Class

To stop mailing ☐ or to change your address ☐ send this sheet with new address to The Farm Index, ERS, U.S. Department of Agriculture, Rm. 1664, Washington, D.C. 20250.

FI XEROX300XDISSDUE011R 1
XEROX UNIV MICROFILMS
SERIALS DEPT
300 N ZEEB RD
ANN ARBOR MI 48106